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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,810	07/22/2003	Jack Dunnous	H1076/20008	6636
3000	7590	01/19/2005	EXAMINER	
CAESAR, RIVISE, BERNSTEIN, COHEN & POKOTILOW, LTD. 11TH FLOOR, SEVEN PENN CENTER 1635 MARKET STREET PHILADELPHIA, PA 19103-2212			TUROCY, DAVID P	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 01/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/624,810	Applicant(s) DUNNOUS ET AL.	
	Examiner David Turocy	Art Unit 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/22/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/8/03, 1/16/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, method of producing multi-color concrete in the reply filed on 11/22/2004 is acknowledged. The traversal is on the ground(s) that both Groups I and II require the same search and therefore there is no undue burden to examine the claims collectively. This is not found persuasive because while the method requires spraying a color dispersion onto concrete, the system for coloring concrete merely recites intended use and therefore the system as claimed can be used to practice another materially different process, such as coloring sand, which requires different search resulting from different classifications.

The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

2. Claims 8 and 23-24 are objected to because of the following informalities:
- a. Claim 8 includes an improper Markush group. The proper form for a Markush group is selected from the group consisting of a A ,B and C.
 - b. Claims 23 and 24 cite "%" without the appropriate qualifier, e.g. wt %, mol %, etc.
- Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 11-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

c. Claim 11 is indefinite because the claims recite providing a polymer-binding agent "capable of integrally binding" with the wet concrete. It is not clear whether or not the integrally binding of the material is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-6, 10-12, 14-18, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patent Publication 2003/0197310 by Bailey et al ("Bailey") in view of US Patent 4946505 by Jungk.

Claim 1: Bailey teaches of a spray mechanism that sprays liquid pigment onto concrete discharging from a vessel to form a pattern of applied color in the wet concrete mix (Abstract, Paragraph 0013). Bailey discloses the concrete is cured to form a resultant structure (Paragraph 0057).

Claims 2 and 10: Bailey discloses the settings of the nozzles, for example the spray pressure and the vertical distance between the concrete and the nozzle, impact the blending of the color into the concrete (Paragraph 0017).

Claims 3 and 4: Bailey discloses that each of the two or more liquid colors is connected to a spray nozzle (Paragraph 0015, 0036).

Claims 5 and 6: Bailey discloses that each spray nozzle can operate at the same time, different colors applied simultaneously, or in alternating fashion, where the first pigment is applied, then the second pigment is applied, then the first is applied again, etc. (Paragraph 0035). Bailey discloses that numerous sequences of pigment application are possible and each sequence will impact the resulting concrete color pattern produced (Paragraph 0035). While Bailey fails to explicitly state controlling the step of spraying using timers, it is the examiners position that controlling using timers is inherent in the producing various sequences of pigment application. In addition it is the examiners position that such alternating spray sequence is inherently spraying in pulses

and it is within the skill of one ordinary skill in the art at the time of the invention to provide a spray sequence using pulses of varying lengths, each having a spray pattern, to provide a desired multi-colored concrete.

However, Bailey fails to disclose mixing a pigment water dispersion and a polymer binding agent to form a spray color dispersion. However, Jungk, teaching of a process for coloring concrete, discloses a known dispersion for coloring concrete comprises pigments, binders, water, and additional additives (Abstract, Example 1). Jungk discloses using any binder that will not be disturbing in the concrete and additionally promotes the dispersing of the pigments in the concrete; include vinyl acetate (Column 3, lines 31-49). Jungk discloses using a slurry of 53% by weight pigment and 2 % by weight binder, which is within the range of the applicants Claims 23 and 24, with the balance water (Example 1).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify Bailey to use the pigment/binder mixture suggested by Jungk to provide a desirable coloring of concrete because Bailey teaches of spraying liquid pigment onto wet concrete and Bailey teaches a pigment/binder mixture easily dissolvable and dispersible in concrete.

Bailey in view of Jungk fails to explicitly teach a resultant polymer structure insoluble in water that remains part of the cured concrete. However, Bailey discloses utilizing multi-concrete blocks in areas subject to weather conditions, including rain,

including architectural concrete blocks and bricks as well as concrete blocks used in various landscaping applications, including retaining wall blocks, pavers, and slabs (Abstract). It is the examiners position that the multi-color concrete blocks as taught by Bailey in view of Jungk inherently has a polymer structure insoluble in water to protect the color pattern within the concrete block from the probable weather conditions.

8. Claims 7-9 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patent Publication 2003/0197310 by Bailey et al ("Bailey") in view of US Patent 4946505 by Jungk and further in view of Kirk-Othmer.

Bailey in view of Jungk teaches all the limitations of these claims as discussed in the 35 USC 103(a) rejection above. However, Bailey in view of Jungk fails to teach of nozzles having a desired flow pattern selected from the group consisting of a solid cone, a hollow cone, and a flat spray, or spraying in the form of a stream.

However Kirk-Othmer, teaching of conventional spray systems, discloses that the spray pattern or shape is an important factor in selecting the right nozzle for certain processes (Page 687, full paragraph 4). Kirk-Othmer discloses that in most cases it is necessary to "fine-tune" the sprays through trial and error to achieve the goals of low cost and high performance (Page 687, full paragraph 4). Kirk-Othmer discloses known and conventional spray patterns utilized in various spray applications include a solid cone, a hollow cone, a flat spray, and a stream (Page 688, Table 2).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Bailey in view of Jungk to use any of the spray patterns, including a solid cone, a hollow cone, a flat spray, and a stream, suggested by Kirk-Othmer to provide a process with high performance and low cost because Bailey in view of Jungk teaches spraying a pigment dispersion to color concrete and Kirk-Othmer teaches trial and error in selecting the specific nozzle pattern for the specific process to optimize the results of process performance and quality of the end product.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Patent Publication 2003/0197310 by Bailey et al ("Bailey") in view of US Patent 4946505 by Jungk and further in view of US Patent 5846315 by Johansen, Jr et al ("Johansen").

Bailey in view of Jungk teaches all the limitations of these claims as discussed in the 35 USC 103(a) rejections above. However, Bailey in view of Jungk fails to teach of including atleast one filler in the pigment/binder mixture to produce a desired effect. However, Jungk, teaching of a process for coloring concrete, discloses a known dispersion for coloring concrete comprises pigments, binders, water, and additional additives (Abstract, Example 1).

Johansen, teaching of an aqueous composition for coloring cement based compositions, discloses including suspension enhancing agents in a pigment/binder aqueous compositions (Abstract). Johansen discloses the suspension enhancing agent decrease the settling of the aqueous component and aids in the stabilization (Column 3,

lines 53-64). It is the examiners position that such suspension enhancing agents inherently act as "fillers".

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Bailey in view of Jungk to use the pigment/binder solution including a filler suggested by Johansen to provide a desirable coloring of a cement based material because Bailey in view of Jungk teaches providing additional additives to an aqueous pigment/binder composition when coloring concrete and Johansen teaches that adding a filler aids in stabilizing the aqueous pigment/binder composition when coloring a cement-based composition.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent 4666648 by Brittain discloses a method of manufacturing roof tiles by applying a color to dispersing concrete. US Patent 5401313 by Supplee et al. discloses multiple binders utilized in an aqueous pigment solution for coloring cement (Abstract). US Patent 4661164 by Sereringhaus Jr discloses that adding fillers to a liquid pigment is well established in the art (Column 1, lines 8-17).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Turocy
AU 1762



FRED J. PARKER
PRIMARY EXAMINER